

### Modifications of functional level of work of cortical cells. Fixiol. sh. SSSR 39 no. 1:27-34 Jan-Feb 1953. (CIML 24:2) 1. Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences USSR, Leningrad.

USSR/Biology - Physiology

FD-2274

Card 1/1

Pub 33-5/18

Author

Lomonos, P. I.

Title

Effect of varying the amount of unconditional nutriment on the condi-

tional reflex activity of dogs

Periodical:

Fiziol. zhur. 40, 566-571, Sep-Oct 1954

Abstract

Investigated changes in the conditional reflex activity of dogs as a result of variations in the amount of food provided. Studies relationship between the strengths of conditional reflexes developed by strong and weak stimuli and the relationship between the processes of stimulation and inhibition. Tables; graphs. Four ref-

erences, 3 of them USSR (1 since 1940).

Institution:

Department of Physiology imeni I. P. Pavlov, Institute of Experimental

Medicine, Leningrad

Submitted :

August 25, 1951

USSR/Human and Animal Physiology (Normal and Pathological). T-12

Nervous System. Higher Nervous Activity. Behavior.

Abs Jour : Ref Zhur - Biol., No 11, 1958, 51311

Author Lomonos, P.I.

Title : Conditioned Reflex Activity of Dogs after Intravenous

Injection of Radioactive Cabalt.

Orig Pub : V sb.: Tr. Vses. konferentsii po med. radiol. Eksperim.

med. radiol. M., Medgiz, 1957, 44-49.

Abstract: When Co<sup>60</sup> (3-62 meurie) was intravenously injected into 5

dogs, intensification or tendency to intensification of positive food conditioned reflexes was observed, as well as impediment of differentiated inhibitions during the first 2 weeks after administration of the preparation. Their relative restoration took place on the 26th-28th day.

Changes of energy relationships and some other disturbances

of HNA higher nervous activity were also noted.

Card 1/2

- 119 -

USER/Human and Animal Physiology - (Normal and Pathological). Action of Physical Factors. Ionizing Radiation.

Abs Jour

Ref Zhur Biol., No 4, 1959, 18077

Author

Lomonos, P.I.

Tnst

istitute of Experimental Medicine

Title

The Charges of Conditioned Defensive Reflexes in Dogs in Radiation Sickness.

Orig Pul

Abstra

zhegodnik, In-t eksperim. med. AMN SSSR, 1956, T.2. 157, 579**-**587

(D) recieved general roentgen irradia lon in a If 400 r with a power of 17 r/min. To a third D a ion of p32 in a dose which corresponded to about r was introduced intravenously. In all D, defensive conditioned reflexes (CK; raising of paw) was produced. latent period, the number of raisings of the paw

Card 1/2

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R00093051

· UBSR/Human and Animal Physiology - (Normal and Pathological). Action of Physical Factors. Ionizing Radiation.

Abs Jour : Ref Zhur Biol., no 4, 1959, 18077

in response to the conditioned stimulus, the number of respiratory movements during its duration and the number of intersignal reactions were registered. The clinical picture of the disease was determined according to morphological composition of blood and weight of the animals. In both variations of irradiation, phase changes of the values of CR were observed. The periods of relative decrease of the values of CR coincided with the critical periods of the course of radiation sickness. The periods of fall of the number of leucocytes in the blood either perceeded the periods of relative decrease of values of CR, or coincided with them. Normal int relations between the values of CR in their decrease were preserved which apparently indicates an increase of processes of inhibition at the expense of induction influences from other regions of the nervous system.

Card 2/2

### I DMONDS, P. I.

"On the State of the Stimulatory Process in the Cerebral Cortex of the Dog Under the Influence of Ionizing Radiation," by O. A. Bryukhanov and P. I. Lomonos, Physiology Laboratory, Central Roentgeno Radiological Institute, Ministry of Health USSR, Leningrad, Fiziological Skiy Zhurnal SSSR imeni I. M. Sechenova, Vol 43, No 2, Feb 57, pp 101-106

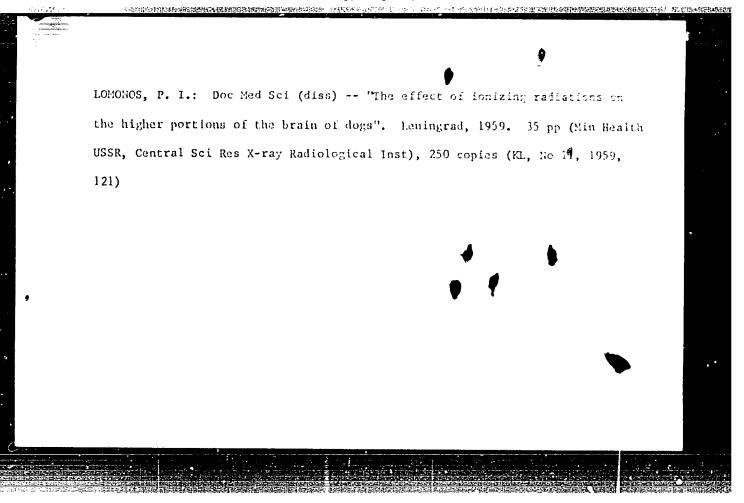
The purpose of the investigation was to study the state of the stimulatory process in the cells of the cerebral cortex on internal irradiation resulting from the intravenous injection of radiophosphorus (p 32).

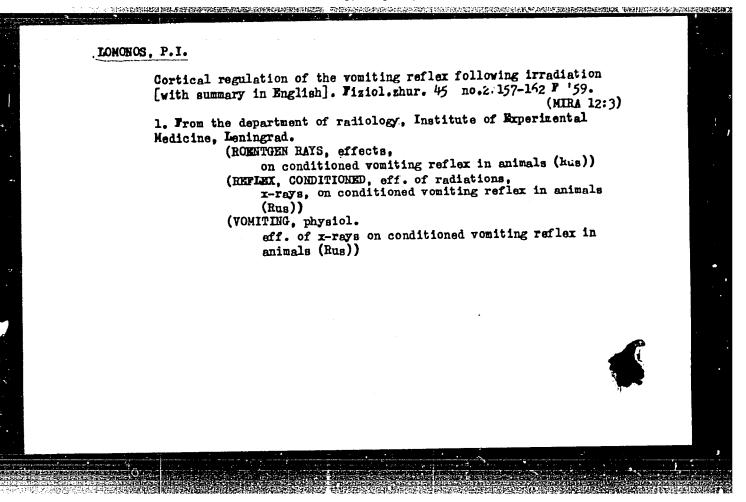
It was found that changes in the condition reflex activity of inmals, with a general tendency towards decrease trength of conditioned reflexes, take place after the action of ionizing radiation on the organism, regardless of the site of irradiation and the nature of the energy.

Tests of the strength of cortical excitation as shown by conditioned reflex summation and by response to caffein auministration have shown that the efficiency of the cortical cells is retained the first few days, and only with the onset of radiation sickness is decreased capacity of the cortical cells observed. (U)

sum. 1374

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### "APPROVED FOR RELEASE: Monday, July 31, 2000

### CIA-RDP86-00513R000930510

40620

S/219/62/053/002/003/003

1015/1215

27.1220 AUTHOR:

TITLE:

Effect of the preliminary administration of radioactive isotopes on the composition of peripheral blood and the survival of animals subsequently x-irradiated with a lethal dose

Byulleten' eksperimental'noy biologii i meditsiny, v. 53, no. 2, 1962, 79-82 TEXT: There are few studies known on the phenomenon of acquired radioresistance. The administration of radioactive isotopes prior to irradiation with lethal doses in order to increase survival rate, has been recently tried. The experiments were carried out on albino rats (180-200 g) and albino mice (20-25 g). The animals received J131, P32 and methionine-S35 prior to x-irradiation. The rats were irradiated with 800 r and the mice with 600 r, which corresponded to LD<sub>60/30</sub>. The time interval between the administration of the radioisotopes and the subsequent irradiation varied according to the greatest functional changes observed in various functional systems. The administration of the radioisotopes 15, 45, and 55 days prior to a whole-body x-irradiation of rats increased their survival rate by 5-23%. The effect of the administration of methionine was greater the longer the time-interval between its administration and the subsequent irradiation. Administration of methionine in mice 15 days prior to irradiation abolished the radiation injury caused by 600 r. Methionine had also a good effect on the blood picture: the number of WBC, especially of netrophiles and cosinophiles, increased. There are 4 figures and 2 tables.

Card 1/2

Effect of the...

S/219/62/002/003/003/003
1015/1215

ASSOCIATION: Laboratoriya radiobiologii Institutu eksperimental'noy meditsiny AMN SSSR, Leningrad (Laboratory of Radiobiology, Institute of Experimental Medicine, AMS USSR, Leninsud)

SUBMITTED: December 30, 1960

Card 2/2

ACCESSION NR: AP4003133

5/0241/63/008/011/0059/0063

AUTHOR: Lomonos, P. I.; Shamakhmudov, A.

TITLE: Distribution of  $P^{32}$  in rat organ tissues under the action of penetrating radiation and on introduction of ACTH

SOURCE: Meditsinskaya radiologiya, v. 8, no. 11, 1963, 59-63

TOPIC TAGS: penetrating radiation, ACTH, histohematic barrier permeability, leucocytosis, lymphopenia, eosinopenia, radiation sickness, radioactive phosphorus distribution, tissue permeability

ABSTRACT: Histohematic barrier permeability for P<sup>32</sup> (20 microcuries /kg) was studied in organs of control and irradiated (800 r) rats without and with ACTH (2 units/100 g). Radioactivity ratio of 1 g tissue to 1 g blood measured by a T-25 BFL end counter served as permeability index for blood, liver, adrenal gland, heart, spleen, and brain. Blood form elements were investigated before and after ACTH was introduced. Permeability of organ tissues was determined 1 hr after F<sup>32</sup> was injected and 3, 6, and 9 hrs after ACTH in control animals and up to 6th day of radiation sickness in irradiated animals.

Card 1/3

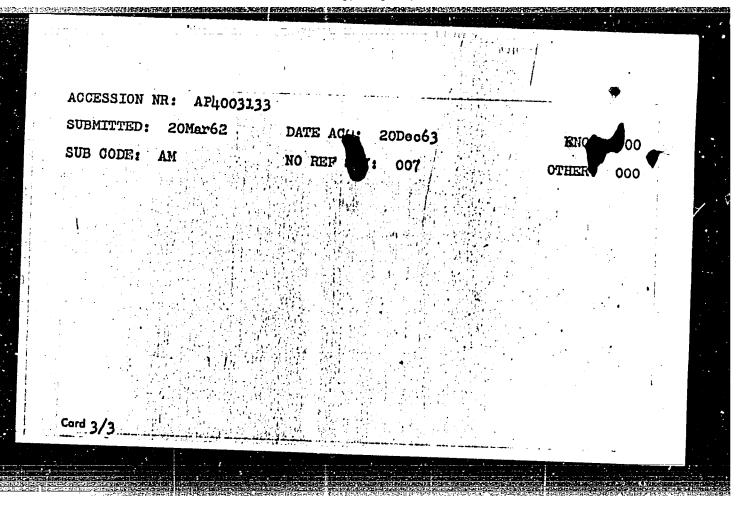
ACCESSION NR: AP4003133

In control animals without ACTH, histohematic barrier permeability is highest in the light tissues, is lower in the kidney, adrenal gland, and spleen tissue, and is lowest in brain tissue. In irradiated animals without ACTH, permeability sharply rises on the 3d day of radiation sickness in all organ tissues under study with no significant changes on the 1st or 6th days. Within 3-6 hrs after ACTH is introduced into control animals, permeability sharply increases in the adrenal gland tissues and increases only slightly in the other organ tissues. With ACTH introduced on the 3d day of radiation sickness, is restored to levels before ACTH with no significant changes in bility of irradiated tissues appears to be caused by increased functioning of hypohpysis-corticoadrenal system and appears related to figures.

ASSOCIATION: Laboratoriya radiobiologii instituta eksperimental noy meditsiny AMN SSSR (Radiobiology Laboratory of the Experimental Medical Institute AMN SSSR)

Card 2/3

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000930510



SCKOLOV, A., otvetstvennyy red.; LOHONOSOV, A., red.

[Program of a course on "Electrochemistry and anticorrosion coatings" for technical schools of the Ministry of the Radio Engineering Industry in the subject "Manufacture of radio insulation materials and radio parts"] Programma kursa "Elektrokhimdia i antikorroziinye pokrytiia" dlia tekhnikumov MRTP po spetsial nesti "Proizvodstvo radioizoliatsionnykh materialov i radiodetalel." Dakva, 1956, 9 p.

1. Russia (1923- U.S.S.R.) Ministerstvo radiotekhnicheskoy promyshlennosti. Upravleniye uchebnymi zavedeniyami.

(Electrochemistry—Study and teacning)

# Improving the work with radio amateurs. Radio no.8:8-9 Ag '54. (MEA 7:8) 1. Predsedatel' Moskovskogo oblastnogo komiteta Vessoyuznogo dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu. (Radio clubs)

# Improve the training of construction workers. Prof.-tekh.obr. 11 no.7:27 0 '54. (NLRA 7:11) 1. Direktor uchebnogo punkta tresta "Stalinmetallurgstroy." (Building--Study and teaching)

107-58-6-1/58

AUTHOR:

Lomonosov, A., Member of the Presidium of the TsK LOSAAF

TITLE:

Let Us Distinguish the Summer Sport Season by/ New Pecords

sportivnoye leto novymi rekordami)

PERTODICAL:

Radio, 1958, Nr 6, pp 1-2 (USSR)

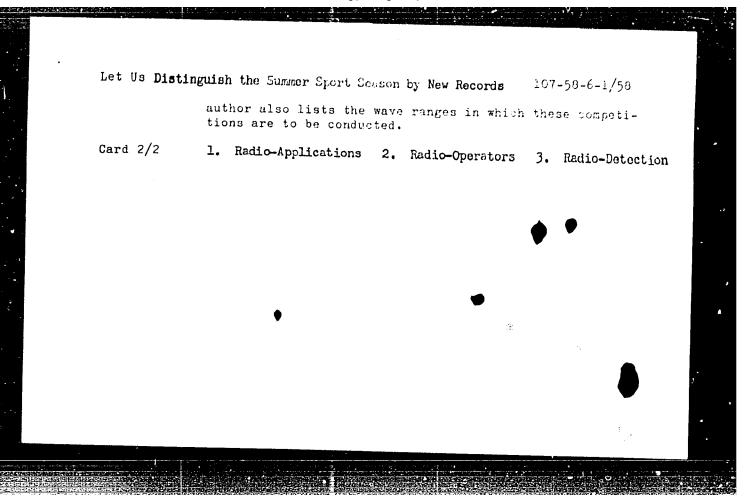
ABSTRACT:

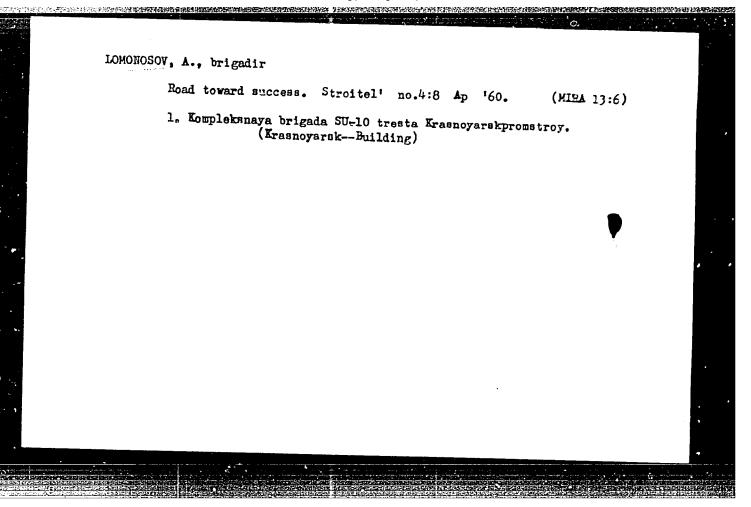
A resolution passed on the 4th All-Union DOSAAF Congress calls for a general increase in the proficiency level of DOSAAF members in those sport branches which may find a military application. In these branches, especially in those where international competitions are held, the capabilities of Soviet sportmen must be raised to meet international standards. The instructions given by the DOSAAF Congress apply to all branches of radio sport. Local DOSAAF organizations and DOSAAF radio clubs are requested to furnish assistance to Soviet radio amateurs and to organize competitions on local levels. However, many DOSAAF organizations of the RSFSR, the Belorussian, Kazakh and Georgian SSR do not even plan competitions. The author points out that it is still time to correct this situation. So-called 'foxhunts" (detection of hidden radio stations by radio) and similar field activities are especially recommended. The

Card 1/2

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L 8492-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/H Pc-4/Pr-4/Ps-4 ASD(m)-3/RPL WW/JWD/MLK/RM

ACCESSION NR: AT4033980

8/0000/63/000/000/0018/0023

AUTHOR: Andrianov, K.A., Lomonosov, A.V., Mil'gotin, I.M., Khananashvili, L.M., Shapatin, A.S.

TITLE: Synthesis of polydimethylsilozmes and silicoorganic polydrethanes with a cycloreticular molecular structure

SOURCE: Geterotsepny\*ye vy\*sokomolekulyarny\*ye soyedineniya (Heterochain Macro-molecular compounds); sbornik statsy. Moscow, Izd-vo "Nauka," 1963, 18-23

TOPIC TAGS: siloxane, silane, crosslinked siloxane, polyurethane, silicoorganic polyurethane, polymer, crosslinked polymer, polydimethylsiloxane, glycoxysilane, elastic polymer, thermostable polymer

ABSTRACT: Six crosslike compounds of the dimethyleiloxane and glycoxysliane series, containing hydroxyl groups at the chain ends, were synthesized (see Table 1 in the Enclosure). The dimethyleiloxane oligomers were synthesized by cleavage of octamethyleyclotetrasiloxane under the influence of KOH, reaction of the potassium salt of dimethyleiloxane obtained with silicon tetrachloride, and conversion of the reaction product to the hydroxy derivative with anotic acid, while the strongyslians were synthesized by

methylsilozsus obtained with silioca tetrachloride, and conversion of the reaction product to the hydroxy derivative with acetic sold, while the glycoxysilanes were synthesized by fransesterification of tetracthoxysilane or phenyltriethoxysilane with glycols. The

L 8492-65

ACCESSION NR: AT4033980

physical properties of these compounds were then investigated. By condensation of crosslike oligomers of the dimethylsiloxale series with phenylmethyl dichlorosilane, crosslinked and non-rosslinked elastic polymers were synthesized with a very low (-120C) glass transition temperature. Silicoorganic polymethenes with a cycloreticular molecular structure, stable to 300C, were obtained in a series of reactions of glycoxysilanes with discovanates. The experimental conditions and procedures are described in detail. Orig. art. has: 3 figures, 1 table and 5 chemical equations.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosovs (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 05May62

ENOL: 01

SUB CODE: OC

NO REF BOV: 002

OTHER: 000

APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R0009305

2/3

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000930510

L 8492-65			gigg Francisco (n. 1964), etc.					0	
ACCESSION RR:	A7	4033980			ENCLOSURE: 0			)1	
	Ę	Compound .	Formula	*20 *D	d20		n <sub>D</sub>		
		tetrakis-(octamethy)				mente	Eule		
	•	-tetrasiloxano-9- hydroxy) silane tetrakis-(hexa-	CH, SI(O—SI)(OH	1,400	0,9884	816,1	8(5,8		
	2	decamethyl-octa- siloxano-17-hydroxy	Olf.						
		silane ietrakis-(octa-	CH: CH:	1,4045	0,9796	615,9	615,2		
	8	tetracontamethyl- tetracosasiloxano-	CH. 7				1 . 1		
		19-hydroxy)silene	81(0-81) <sub>M</sub> OH	1,4053	0.9703	1798,2	1797,4		
	. I	etrakis-(ethylene- glycoxy)silane etrakis-(diethyl-	SIGCH*CH*OH/*	1,6536	1,2642	58,50	55,04		
	6	llycoxy) silene henyi-tris-(ethyi- meglycoxy)silene	CHPEROCHICETORIA PROCHICHTOCHICHTORIA	1,4640					

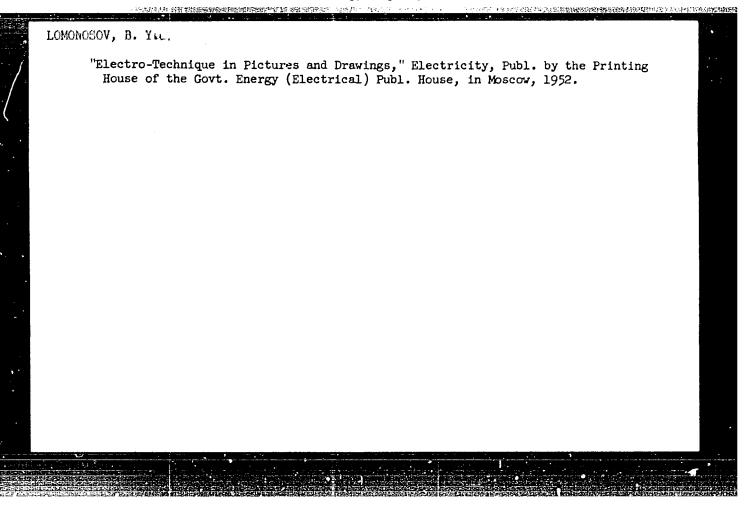
Pc-4/Pr-4/Ps-4/Pt-10 EPF(a)/EPR/EPA(a)-2/EWP(j)/SWT(m)/T 1. 25650-65 RPL RH/WW 5/0081/64/000/017/5036/5036 ACCESSION NR: AR5000709 SOURCE: Ref. zh. Khimiya, Abs. \_78203 AUTHOR: Andrianov, K. A.; Khananashvili, L. H.; Mil'gotin, I. M.; Shapatin, A. S.; Lomonosov. A. V. TITLE: The synthesis of polydimethylsiloxanes and silicoorganic polyurethans with a cycloreticular molecular structure GITED SOURCE: Sb. Vysokomolekul. soyedineniya. Geterotsepn. vysokomolekul. soyedineniya. M., Nauka, 1963, 18-23 TOPIC TAGS: polydimethylsiloxane, silicoorganic polyurethan, heteroorganic polymer, polyurethan synthesis, polysitoxane synthesis, cross-linked polymer, alkylene diisocyanate, glycoxysilane, silicon tetrachloride, transesterification, alkoxysilane TRANSLATION: Cross-linked oligomers of the dimethylsiloxane series were obtained by opening the rings of octamethylcyclotetrasiloxane under the influence of KOH and then reacting the resultant potassium salts of dimethylsiloxanes with silicon tetrachloride. Glycoxysilanes were synthesized by the transesterification of Contracthoxysilane with glycols at 155C and of phenyltricthoxysilane with glycols

L 25650-65

ACCESSION NR: AR5000709

at 175C. The following 6 cross-linked compounds of the dimethylsiloxane and glycoxysilane series, with OH groups at the ends of the branching chains, were synthesized: tetrakis-(octamethyl-tetrasiloxano-9-hydroxy)-silane C32H100O20Si17; tetrakis-(hexadecamethyl-octasiloxano-17-hydroxy)-silane C64H196O36Si33; tetrakis-(octatetracontamethyl-tetracicosasiloxano-49-hydroxy)-silane C192H5800100Sign; tetrakis-(ethylaneglycoxy)-silane CgH2008S1; tetrakis-(diathyleneglycoxy)-silane; and phenyl-tris-(ethyleneglycoxy)-silane C16H36O12Si. Values for the refractive index, density ind molar refraction of the synthesized compounds are given, and it is pointed out that the denzity decreases with increasing molecular weight. The authors studied the condensation of tetrakis-(octamethyl-tetrasiloxano-9-hydroxy)silane at 2000 for which a reaction scheme is given, as well as that of the first 3 cross-linked compounds listed above with methylphenyldichlorosilane, resulting in products which were viscous at room temperature, readily soluble in xylene and CC14, and had a low glass temperature of about -120C. The authors also obtained insoluble elastic products with a glass temperature of about -1206. The reaction of the last 3 cross-linked glycomysilanes listed above with hexamethylen- and m-toluylene disocyanate at 200 leads to the formation of refractory (up to 300C) insoluble products which do not decompose when heated to 300C (differential thermal analysis). V. Tolstoguzov

SUB CODE: OC Card 2/2 ENGL: 00



LOMONOSO", B. YU. PROF	Voltage - Measurements  Voltage - Measurements  Turrents, Electric - Measurements  Tu. Lomonosov, Dr of Heavyside's Formula, "Prof B.  Yu. Lomonosov, Dr of Technical Sciences, Moscov Energetics Institute ineni Molotov, 1 p  "Elektrichestvo" No 5  Author takes Heavyside's formula  i. U. \{ \frac{z(c)}{z(c)} \cdot \sumeq \frac{e^{p_K c}}{p_K c} \cdot \cdot (e_K) \}  when a circuit is hooked into a DC circuit, U. Author, however, submits a variation to this formula which however, submits a variation to this formula which would permit a similar solution in the case of a sinusoidal and exponential voltage. Discusses the basis for his modification and arrives at the followbasis for his modification and arrives at the followbasis for his modification in the case of a sinusoidal mis modification and arrives at the followbasis for his modification in the case of a sinusoidal mis modification and arrives at the followbasis for his modification in the case of a sinusoidal mis modification and arrives at the followbasis for his modification in the case of a sinusoidal mis modification and arrives at the followbasis for his modification in the case of a sinusoidal mis modification and arrives at the followbasis for his modification in the case of a sinusoidal mis modification and arrives at the followbasis for his modification in the case of a sinusoidal mis modification and arrives at the followbasis for his modification to this formula the followbasis for his modification to the followbasis for his modification to the followbasis for his modification to the followbasis for his modification	
NAME OF THE PARTY		

ARNDT, Yu., arkhitektor; LOMONOSOV, D., inzh.

What standard plans of hotels should be like. Zhil. stroi.
no.12:7-11 '62. (MIRA 16:1)

(Hotels, taverns, etc.—Standards)

SOV-127-58-10-12/29

AUTHORS:

Zver'kov, S.M. and Lomonosov, G.G., Mining Engineers

TITLE:

Which Explosive Does the "Medvezhiy Ruchey" Mine Need? (Kakiye vzryvchatyye veshchestva nuzhny rudniku "Medvezhiy

Ruchey"?)

PERIODICAL:

Gornyy zhurnal, 1958, Nr 10, pp 41-43 (USSR)

ABSTRACT:

The mine "Medvezhiy Ruchey" of the Noril'sk Metallurgical Mining Trust is exploited by the open-pit method. Blasting works are hampered by: 1) a high fracturing of rocks; 2) waterlogged conditions in spring and summer, and 3) buildings and living quarters. Thus the explosives should possess the following characteristics: high "brisance", water and frost resistance, maximal loading density and minimal throwing capacity. Different makes of ammonite and trotyl are being used at present. The author experimented with all available varieties of these explosives and found that new explosives of better quality must be produced, since those available are unsatisfactory.

Card 1/2

SOV-127-58-10-12/29
Which Explosive Does the "Medvezhiy Ruchey" Mine Need?

There is 1 photo, 1 graph and 1 table.

ASSOCIATION: Noril'skiy gorno-metallurgicheskiy kombinat (The Noril'sk Metallurgical Mining Combine)

1. Mining industry--USSR 2. Explosives--Effectiveness

Card 2/2

GORDETEV, V.P., goruyy insh.; LOMONOSOV, C.G., gornyy insh.

Multiple-row short-delay blasting in open-pit mines of the Noril'sk Mining and Metallurgical Combine. Gor. shur. no. 1:46-48 Ja '61. (MIRA 14:1)

1. Noril'skiy gorno-metallurgicheskiy kombinat. (Noril'sk--Strip mining) (Blasting)

LOMONOSOV, G.G., gornyy inzh.; ZVER'KOV, S.N.

Water blasting method of breaking oversized rocks in open pits. Gar. zhuv.
no.4:25-37 Ap '63. (MIRA 16:4)

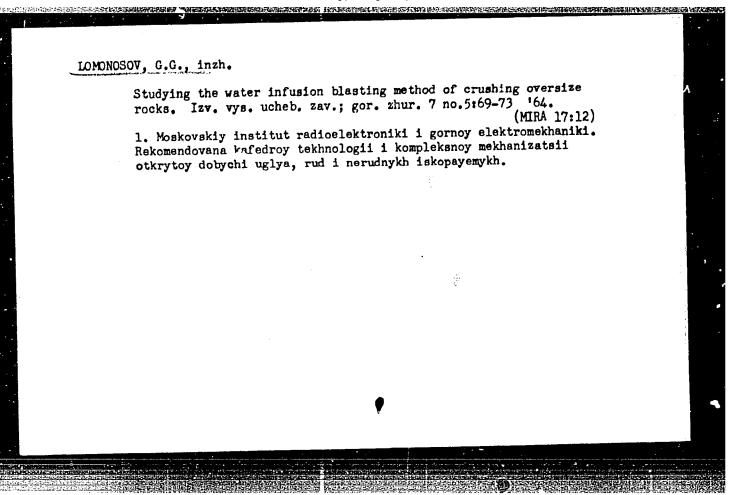
1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki
(for lomonosov). 2. Glavnyy inzh. rudnika "Yuznyy" (for Zver'kov).
(Blasting)

## "APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000930510

RZHEVSKIY, Vladimir Vasil'yevich, prof., doktor tekhn. nauk;
BAKHTIK, Gennadiy Antonovich; LOMONOSOV, Geral'd Georgiyevich;
NOVIK, Gotfrid Yanovich

[Technology and overall mechanization of coal, ore, and rock
products strip mining] Tekhnologiia i kompleksnaia mekhanizatisia otkrytoi dobychi uglia, rud i nerudnykh iskopaenykh.
Moskva, Mosk. in-t radioelektroniki i gornoi elektromekhv.iki.
No.3. [Freparation of rocks for mining] Podgotovka gornykh porod k vyemke. Pt.1.[Technological processes] Tekhnologicheskie
protsessy. 1963. 112 p. (MIKA 17:9)



# LOMONOSOV, I.G. Effective designs for logging dams. Les.prom. 35 no.4: 20-22 Ap '57. 1. TSentral'nyy nauchno-issledovatel'skiy institut lesoplava. (Dams)

KHRUSTALEV, Sergey Serapionovich; TSYGANOV, B.Ya., inzh., retsenzent;

LOMONOSOV, I.G., st. nauchn. setr., retsenzent; SATIN, M.S.,

st. nauchn. setr., etc., BEZGODOVA, L.V., red.

[Building. Building materials; a textbook for students of the faculties of Forestry Engineering, the Mechanical Technology of Wood, Forest Management, Chemical Technology, and Engineering Economics] Stroiteline delo. Stroiteline materialy; uchebnoe posobie dlia studentov fakuliteto lesoinzhenernogo, mekhanicheskoi tekhnologii drevesiny, lesokhoziaistvennogo, khimiko-tekhnologicheskogo, inzhenerno-ekonomicheskogo. Leningrad, Vses. zaochnyi lesotekhn. in-t, 1964. 71 p. (MIRA 18:7)

LCMONOSOV, Ivan Grigor'yevich, starshiy nauchnyy sotrudnik; ARYKIN,

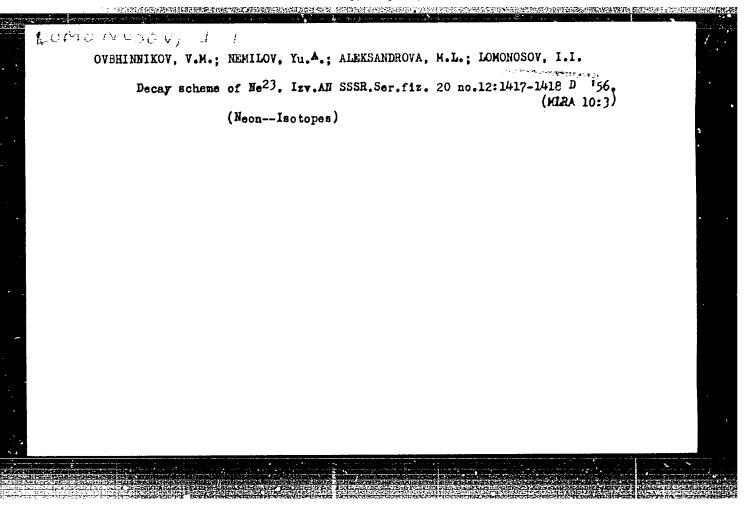
Ivan Grigor'yevich; VASIL'KOVA, Regina Yevgen'yevich; ZHURENKOV,
Yevgeniy Aleksandrovich; LEBEDEV, Mikhail Petrovich; OVCHINNIKOVA, Dina Mikhaylovna; YUZVUK, Vladimir Yefimovich. Prinimali
uchastiye: ARYKIN, I.G., starshiy nauchnyy sotrudnik; YUZVUK, V.Ye.,
starshiy nauchnyy sotrudnik; LEBEDEV, M.P., starshiy nauchnyy sotrudnik;
OVCHINNIKOVA, D.M., mladshiy nauchnyy sotrudnik; VASIL'KOVA, R.Ye.,
mladshiy nauchnyy sotrudnik; ZHURENKOV, Ye.A., mladshiy nauchnyy sotrudnik. ZHURAVLEV, B.A., red.izd-va; PARAKHINA, N.L., tekhn.red.

[Album of designs of dams to be built on timber floating rivers]
Al'bom konstruktsii lesosplavnykh plotin. Moskva, Goslesbumizdat,
1959. 212 p. (MIRA 13:7)

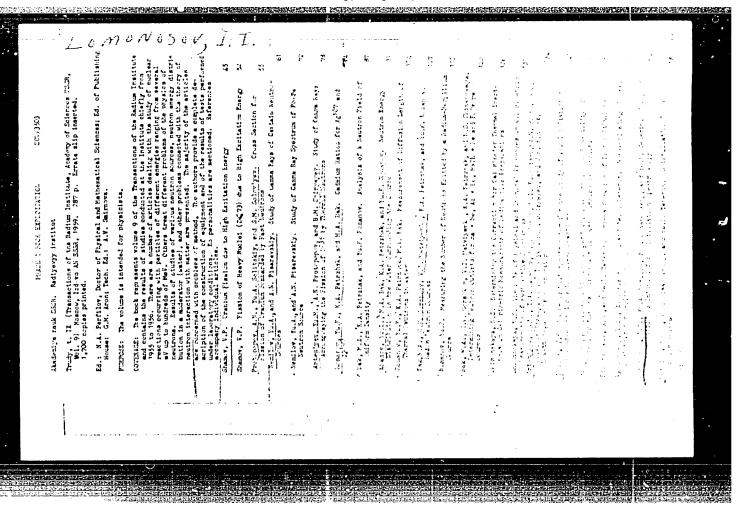
1. TSentral'nyy nauchno-issledovatel'skiy institut lesosplava (for all, except Zhuravlev, Parakhina).

(Lamber--Transportation) (Dams)

# "APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000930510



"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000930510



SOV/12U-59-4-14/50

AUTHORS: Lomonosov, I. I., Pisarevskiy, A. N., Soshin, L. D.

TITLE: The Conversion Efficiency of NaJ(T1) Crystals

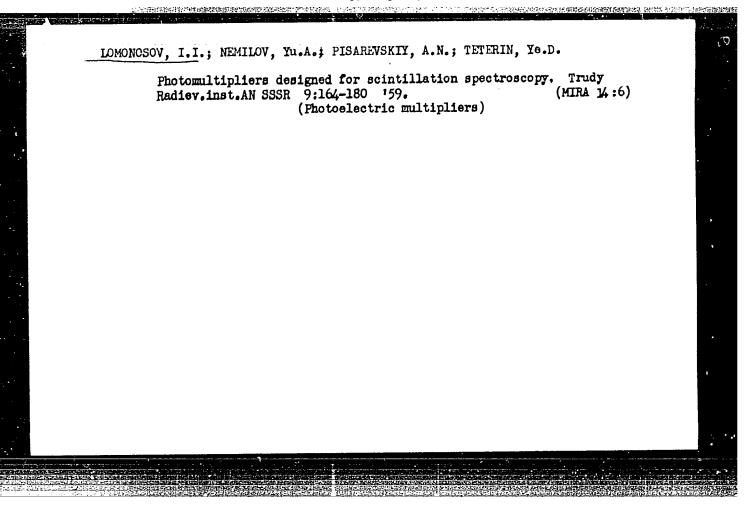
PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 4, pp 70-71 (USSR)

ABSTRACT: Crystals grown by the Kyropoulos and Stockbarger methods are used with  $\gamma$ -rays of energy up to 1330 keV (the table lists the values, where  $\chi$  is given by the second formula on p 70), Figs 1 and 2 show respectively the relation of  $\Delta^2$  and  $\Delta^4$  to 1/E. It is concluded that the resolving power is overestimated unless proper allowance is made for the quantity b (the inherent resolving power) in the first formula on p 70. The paper contains 2 figures, 1 table and 7 references, 3 of which are English and 4 Soviet.

ASSOCIATION: Radiyevyy institut AN SSSR (Radium Institute, Academy of Sciences, USSR)

SUBMITTED: June 23, 1958.

Card 1/1



21(3)

507/48-23-2-19/20

AUTHORS:

Nemilov, Yu. A., Lomonosov, I. I., Pisarevskiy, A. N.,

Soshin, L. D., Teterin, Ye. D.

TITLE:

Some Problems on the Linearity of the Scintillation Spectrometer

(Nekotoryye voprosy lineynosti pri stsintillyatsionnoy

spektrometrii)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,

Vol 23, Nr 2, pp 257-262 (USSR)

ABSTRACT:

In a more accurate investigation of the scintillation reaction of NaJ(T1) in the case of  $\gamma$  excitation the authors found

deviations from the reaction linearity up to 20% within the range of E,  $\langle$  100-150 kev (Ref 6). This problem was investi-

gated according to a method already applied in previous papers. The measurements were carried out by means of crystals produced at the Institut kristallografii AN SSSR (Crystallographical Institute of the AS USSR) and in the Khar'kov Works. The

crystals were bred according to methods devised by Kiropulos and Stokbarger. The measurement results of various crystals  ${\rm MaJ}({\rm Tl})$ ,  ${\rm CsJ}({\rm Tl})$ ,  ${\rm KJ}({\rm Tl})$  on deviation of the scintillation

Card 1/3

reaction from linearity within the range 10-1500 kev are

sov/48-23-2-19/20

Some Problems on the Linearity of the Scintillation Spectrometer

listed in a table. Perceptible deviations were found within the range 50-100 kev. It represented a minimum which attained different value: in the individual crystals (Fig 1); the least value was found with KJ(T1). Besides, the dependence of resolving power on the energy of the measured radiation and the effectiveness of conversion of the crystals were investigated. In the case of ideal crystals there is a linear dependence of the square half width of spectrometer lines  $\Delta_c^2$  on . In the case of small E values this dependence is exsed by  $\Delta_c = \sqrt{\Delta_K^2 + \Delta_\Phi^2}$ , where  $\Delta_K$  denotes crystal resolution and  $\Delta_{\Phi}$  that of FEU. In the case of high energies the effectiveness of conversion x is to be determined according to formula (6) (Ref 14). For a number of  $E_{\gamma}$  values the correspondit & w values are given in %. A duplication of lines of the total energy by NaJ(T1) crystals was found, the presence of which possibly may be attributed to crystal water. There are 4 figures, 1 table, and 15 references, 4 of which are Soviet.

Card 2/3

507/48-23-2-19/20

Some Problems on the Linearity of the Scintillation Spectrometer

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR)

Card 3/3

Comowesev, I.I.

82554

S/181/60/002/007/037/042 B006/B060

24.3500

Lomonosov, I. I., Nemilov, Yu. A.

TITLE:

AUTHORS:

The Effect of an Electric Field on the Scintillation Process

in CsI(T1)

PERIODICAL:

Fizika tverdogo tela, 1960, Vol. 2, No. 7, pp. 1629-1631

TEXT: The problem of the mechanism of the energy transfer to the luminescence centers is still in the discussion stage. For the phosphorescence of alkali halide crystal, two migration mechanisms are regarded as possible: the exciton—and the electron—hole mechanism. If the latter is correct the luminescence intensity must be susceptible to influence an outer electric field. In order to study this, the authors conducted investigations on a CsI(Tl) crystal (diameter 20 mm, thickness 150  $\mu$ ) with a setup shown schematically in Fig. 1. The crystal was placed between a transparent electrode ( $SnO_2$  film on glass) and a 5  $\mu$  thick aluminum foil, in the case

of an excitation by a particle, and a semitransparent platinum layer on a quartz disk in the case of a photoexcitation. The sources of the exciting radiation were  $\Upsilon^{91}(\beta)$ ,  $Pu^{239}(\alpha)$ , and a spectrophotometer of the type

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The Effect of an Electric Field on the Scintillation Process in CsI(T1)

S/181/60/002/007/037/042 B006/B060

The pulse height spectrum was taken with a 128-channel analyzer of the type AMA-3C (AMA-3S). The investigations yielded the following results: 1) The total radiation of the phosphor (fluorescence + phosphorescence), excited by fast electrons, decreases with growing field strength, as can be seen from Fig. 2. 2) A study of the pulse height spectrum showed that, within the limits of statistic error, no influence of the field can be observed.

3) On the excitation of phosphor by ultraviolet light, the emission intensity does not depend on the field applied in the whole range of waves between 200 - 330 mm. 4) On the excitation of phosphor by alpha particles neither the total radiation nor the pulse amplitude depend on the field applied. These results support the exciton mechanism. There are 2 figures and 6 references: 4 Soviet and 1 Swiss.

SUBMITTED:

November 28, 1959

Card 2/2

VYAZEMSKIY, V.O.; LOMONOSOV, I.I.; PISAREVSKIY, A.N.; PROTOPOPOV, Kh.V.; RUZIN, V.A.; TETERIN, Ye.D.. Prinimal uchastiye KLYUCHNIKOV, V.N.; RYBAKOV, B.V., red.; SMOLYAN, G.L., red.; POPOVA, S.M., tekhm. red.

[Scintillation method in radiometry] Stsintilliatsionnyi metod v radiometrii. By V.O.Viazemskii i dr. Moskva, Gos. izd-vo lit-ry v oblasti atomnoi nauki i tekhniki, 1961. 429 p. (MIRA 14:9) (Scintillation counters)

L 32631-66 ACC NR. AP6019003

SOURCE CODE: UR/0109/66/011/006/1145/1147

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AUTHOR: Volina, V. V.; Lomonosov, I. I.

ORG: none

TITLE: Noise and stability of photomultipliers

SOURCE: Radiotekhnika i elektronika, v. 11, no. 6, 1966, 1145-1147.

TOPIC TAGS: photomultiplier, multiplier phototube

ABSTRACT: The results are reported of an experimental investigation of static and dynamic noise characteristics of 400 specimens of FEU-13, -37, and -43 Soviet-made photomultipliers. Their suitability for operating in tritium scintillation counters was determined. At voltages cc. responding to a dynamic multiplication factor of 10<sup>6</sup>, the following characteristics were measured: (a) number of single-electron pulses, (b) dark current, (c) noise-characteristic plateau (anode pulse number vs. supply voltage at a constant discrimination thresheld). Numerical values of the above characteristics are reported. It is found that the photomultiplier stability can be quickly evaluated by comparing the thermionic emission of its photocathode with its dark current. "In conclusion, the authors wish to thank Yu. A. Nemilov for discussing the results and N. A. Surov for his help in the experimental work." Orig. art. has: 3 figures.

SUB CODE: 09 / SUBM DATE: 24Jul65 / ORIG REF: 002 / OTH REF: 002/ ATD PRESS:5023

Card 1/1

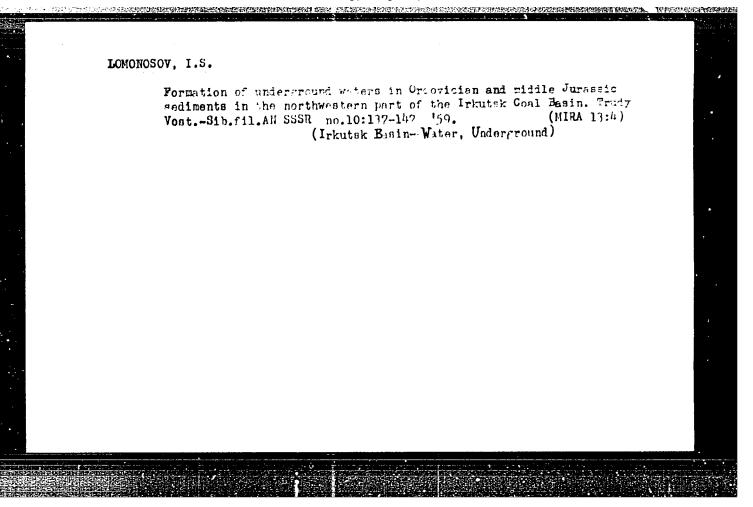
IDC: 621.383.292

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP8

CIA-RDP86-00513R0009305100

LOMONOSOV, I., S., Cand Geol-Min Sci -- (diss) "Subterranean waters of the northwestern depression of the Irkutsk coal-bearing basinand the adjacent Sayan Ministrain area." Len, 1959. 14 pp (Min of Higher Education USSR. Len Order of Lenin and Labor Red Banner Mining Inst im G. V. Plekhanov), 150 copies. (KL, 50-59, 125)

-10-



TKACHUK, V.G., doktor geol.-miner. nauk, otv. red.; LOMONOSOV,
I.S., kand. geol.-miner. nauk, red.; PINNEKER, Ye.V.,
kand. geol.-miner. nauk, red.; YASNITEKAYA, N.V., red.;
FILIPPOVA, B.S., red.; SHOKHET, B.S., red.izd-va;
GUS'KOVA, O.M., tekhn. red.

[Mineral waters of Eastern Siberia] Mineral'nye vody
Vostochnoi Sibiri. Moskva, Izd-vo AN SSSR, 1963. 148 p.

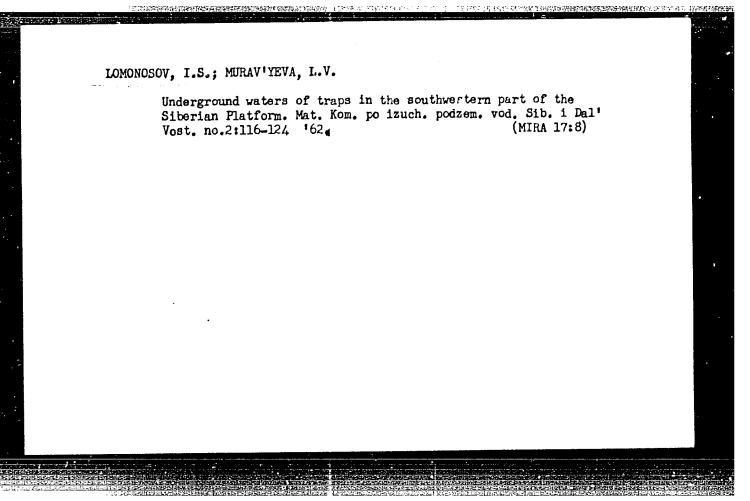
(MIRA 17:1)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut
zemnoy kory.

PINNEKER, Ye.V.; LOMONOSOV, I.S.

Concentrated brines of the Siberian Platform and their analogues in Asia, Europe, Africa, and America. Izv. AN CSSR. Ser. gecl. 29 no.10:30-44 0 '64. (MIEA 17:11)

1. Institut zemnoy kory Sibirskogo otdeleniya AN GSSR, Irkutak.



AL'TSHULER, S.Z., inshener; LOMONOSOY, M.A., inzhener; ROZENTAL', A.Ya., inzhener; RYABKO, N.M., inzhener.

Damage to turbogenerator rotors produced by the British firm "BTH." Elek.sta. 28 no.9:86-87 S '57. (MIRA 10:11) (Turbogenerators)

Origin of cavitation near the vibrating parts of hydreulic machiner;
Dop. AN URSR no.2:111-114 '54. (MIRA 8:4)

1. Fiziko-tekhnichniy institut AN URSR. Predstavleno deystvite!nym chlenom AN USSR K.D.Sinel'nikovym.
(Cavitation)

SUBJECT

USSR/MATHEMATICS/Functional analysis

CARD 1/1

AUTHOR TITLE

LOMONOSOV M.I.

On the decomposition of the operator  $-\left[\frac{d}{dy}\left[p(y)\frac{d}{dy}U\right]+q(y)\right]$  in terms of eigenfunctions

terms of eigenfunctions.

PERIODICAL

Doklady Akad. Nauk 105, 412-415 (1955)

reviewed 7/1956

The author considers the selfadjoint differential operator of second order

$$L\left[U\right] = -\frac{d}{dy}\left[p(x) \frac{d}{dy} U\right] + q(y)U$$

given on the semi-interval  $0 \le y \le c \le \infty$ , where p(y) > 0 is continuous, q(y) is real and summable on every segment [0,d],  $d \le c$ . Under the assumption of two times differentiability of p(y) this operator has been treated several times by Marcenko and Levitan. The author generalizes these well known results to the case that p(y) is only one times differentiable. The representation is similar to that of Marčenko (Izvestija Akad. Nauk, Ser. mat. 19, (1955) No.6).

LOMONOSOV, M. I., Candidate Phys-Math Sci (diss) -- "Some asymptotic formulas for spectral functions and traces of differential second-order operators".

Khar'kov, 1959. 8 pp (Min Higher Educ Ukr SSR, Khar'kov Order of Labor Red Banner State U im A. M. Gor'kiy), 150 copies (KL, No 24, 1959, 126)

LOMONOSOV, M.V.

Fundamental solutions to elliptic equations. Dokl. AN SSSR 152 no.2:269-271 S '63. (MIRA 16:11)

1. Predstavieno akademikom S.L. Sobolevym.

### "APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000930510

Lomonosev, N. 17.

.AUTHOR:

Sergeyev, A. S., Docent

105-58-4-30/37

TITLE:

Dissertations (Dissertatsii)

PERIODICAL:

Elektrichestvo, 1958, Nr 4, pp. 89 - 90 (USSR)

ABSTRACT:

For the Degree of a Candidate of Technical Sciences,

1948 - 1954.

At the Moscow Electromechanical Institute of Railroad Traffic Engineers (Moskovskiy elektromekhanicheskiy institut inzhene-

rov zheleznodorozhnogo transporta).

N M. Lomonosov, on April 28, 1948:"Method for the Determination of Soil Parameters in the Pylon Construction types of a Contact Network". Official opponents were: Doctor of Techn, Sciences Professor V. B. Medel' and Candidate of

Technical Sciences I. I. Vlasov.

M. Ye. Krest'yanov, on June 2, 1948: "Analysis of the Problem on the Selection of the Most Favorable Line Cross Section in the Contact Network", Official opponents were: Doctor of Technical Sciences Professor M. A. Petrov, Engineer K. S. Sal'nikov and Candidate of Economic Sciences Docent A. L.

Card 1/4

Lur'ye.

P. H. Shlyakhto.

Dissertations

105-58-4-30/37

V. V. Matyashevich, on June 23, 1948: "Influence of Traffic Organization on the Load of Substations and the Power Loss in the Contact Network". Official opponents were: Doctor of the Technical Sciences V. B. Medel, Engineer L. I. Gruber and Engineer L. M. Pertsovskiy. G. V. Fominskiy, on June 23, 1948: "Improvement of the Characteristic of the Electrolocomotives B $\Pi$ -22 and B $\Pi$  22M in the Case of Parallel Operation in a System of Many Units". Official opponents were: Doctor of Technical Sciences Professor K. G. Markvardt and Candidate of Technical Sciences S. M. Serdinov. I. I. Kanter, on October 26, 1949: "Self-Exciting Threephase Invertors (Converter)". Official opponents were: Doctor of Technical Sciences M. A. Chernyshev and Candidate of Technical Sciences Docent G. G. Markvardt. N. V. Lorents, on March 29, 1950: " Investigation of the Transition Processes in Traction Motors of D. C. Electrolocomotives". Official opponents were: Doctor of Technical Sciences Professor N. V. Gorokhov and Candidate of Technical Sciences

Card 2/4

Dissertations

105-50-4-30,/37

I. I. Beneshevich, on June 28, 1950: " Influence of the Parameters and the Mode of Operation in Electric Railroads With Battery Car Transport on the Principal Structure of Automation Devices". Official opponents were: Doctor of Technical Sciences Professor V. B. Medel! and Engineer L. M. Pertsovskiy. Ye. G. Gnilosyrov, on February 28, 1951: " Productivity and Capacity Analysis of Fuel- and Electric-Railroad Stoves", Official opponents were: Doctor of Technical Sciences P. K. Konakov and Doctor of Technical Sciences Professor N. V. Gorokhov. V. A. Shilovskiy, on June 25, 1952: "Investigation of the Magnetic System of Traction Motors of Battery Cars (Section cP)". Official opponents were: Professor V. B. Medel' and Candidate of Technical Sciences Docent P. N. Shlyakhto. H. S. Pomiluyko, on May 27, 1953: " Investigation of Electromagnetic Phenomena in the D.C. Traction Motor for the Purpose Extending the Control Properties and for Determining the Possibility of a Voltage Increase". Official opponents were: Doctor of Technical Sciences Professor Ye. N. Nitusov

Card 3/4

Disserations

105-58-4-30/37

and Doctor of Technical Sciences Professor K. G. Markvardt. V. N. Pupynin, in January 1954: "Protection of the Contact Network of Electric Reliroads Against Short-Circuit Currents". Official opponents were: Doctor of Technical Sciences M. A. Chernyshev and Candidate of Technical Sciences Docent I. Ya. Ryshkovs'tiy.

AVAILABLE:

Library of Congress

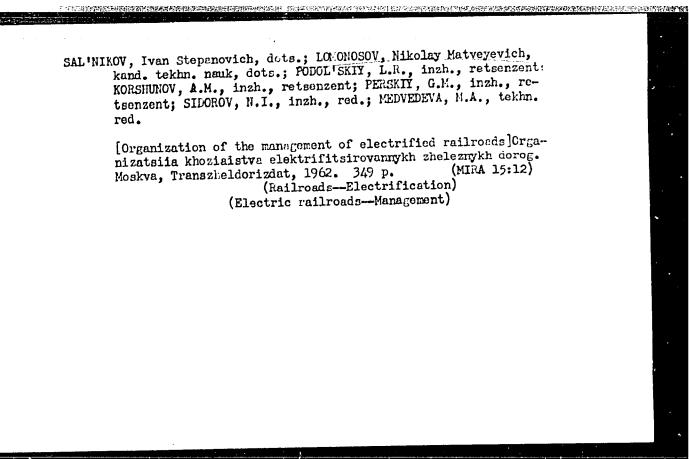
1. Electrical engineering-Reports

Card 4/4

Generalization of practices in designing catenary systems ("Designing catenary systems for electrified railroads" by I.I.Vilasov, B.G.Forshnev, A.V.Fraifeld. Reviewed by M.M.Lomonosov) Zhel.dor.transp. 42 no.12191 D'60.

(Electric railroads—Wires and wiring)

(Vlasov, I.I.) (Porshnev, B.G.) (Fraifeld, A.V.)



# "APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000930510

Distribution of p32 in the tissue of rat organs under the effect of ionizing radiation and introduction of ACTH. Med. rat. 8 no.11: 59-63 N '63. (MEA 17:12)

1. Iz laboratorit radiobiologii Instituta eksperimental noy meditainy AMN SSSR.

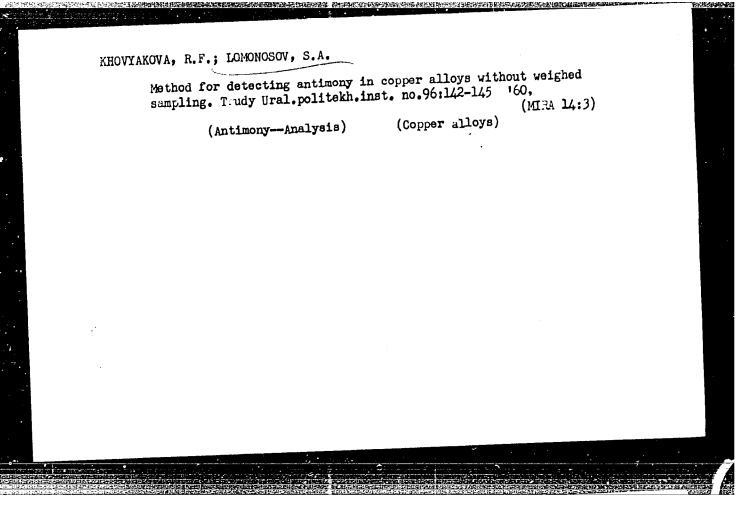
# "APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000930510

LYSOGOROV, S.D., doktor sel'skokhozyaystvennykh nauk; LOMONOSOV, P.I.

Controlling drought in the southern stepps of the Ukraine.

Zemedelie 26 no.3:21-28 Mr '64.

1. Glavryy agrorom kolkhoza imeni Kirova Belozorakogo proizvodatvennogo upravleniy...



LOMONOSOV, S.A.; RYBAKOVA, Yu.A.; PODCHAYNOVA, V.N.; BEDNYAGINA, N.P.

Extraction separtion of thallium using 1,5-dibenzimidazolylformazans.

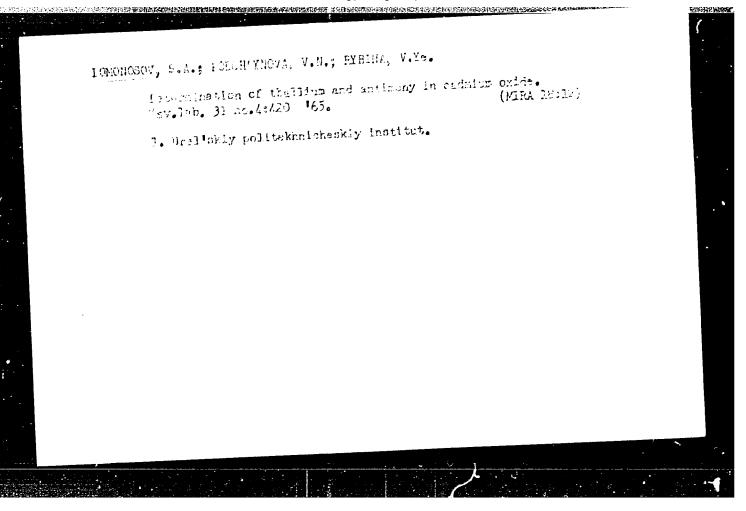
Zhur.anal.khim. 19 no.9:1062-1066 '64.

1. Ural'skiy politekhnicheskiy institut imeni Kirova, Sverdlovsk.

LOMONOSOV, S.A.; MURCHTEYN, M.K.

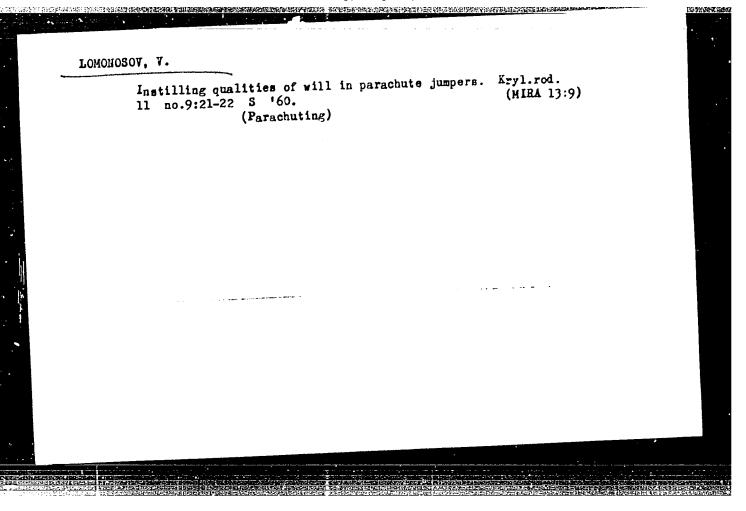
Complex-forming groups of p.p!-bis-dimethylaminodiphenyl-3-(9-cyano-complex-forming groups of p.p.)

1. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut, sverdlovsk.



BUKLER, Veniamin Osherovich; RABINOVICH, Yuriy Izrailovich; ANGELEVICH,
N.B., inzh., retsenzent; GIRSHMAN, G.Kh., inzh., retsenzent;
LOMONOSOV, S.Ya., inzh., retsenzent; HUBINCHIK, N.M., inzh.,
retsenzent; FEDOSEYEV, D.N., red.; ZHITNIKOVA, O.S., tekhn.red.

[Assembling of radio equipment] Sborka radioapperatury. Moskva,
Gos.energ.izd-vo, 1960. 347 p.
(Radio--Equipment and supplies)



VASIL'YEV, Fedor Stepanovich; LOMONOCOV, Vasiliy Grigor'yevich;

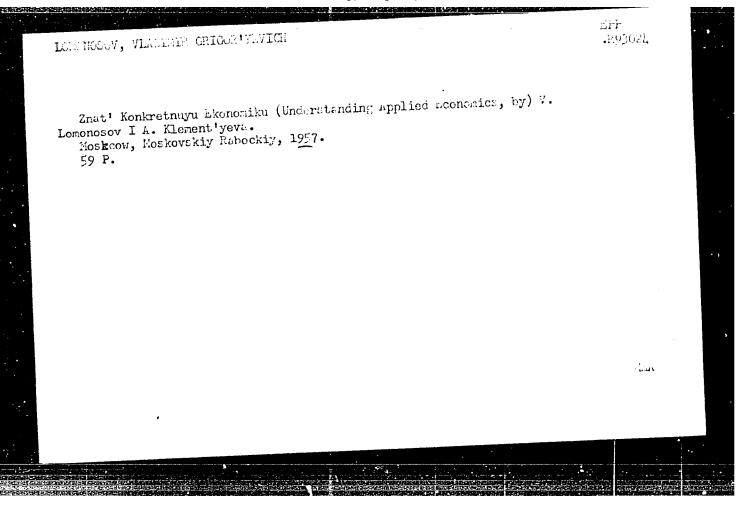
KAZAKOV, N., red.

[Flax is our wealth] Len - nashe bogatstvo. Smolensk,
Smolenskoe knizhnoe izd-vo, [n.d.] 39 p. (MIRA 17:7)

1. Predsedatel' khokhoza "Krasnyy dobrovolets" Smolenskogo rayona (for Vasil'yev). 2. Predsedatel' opornopokazetel'nogo khozyaystva kolkhoza im. M.Gor'kogo
Yel'ninskogo rayona (for Lomonosov).

### "APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000930510

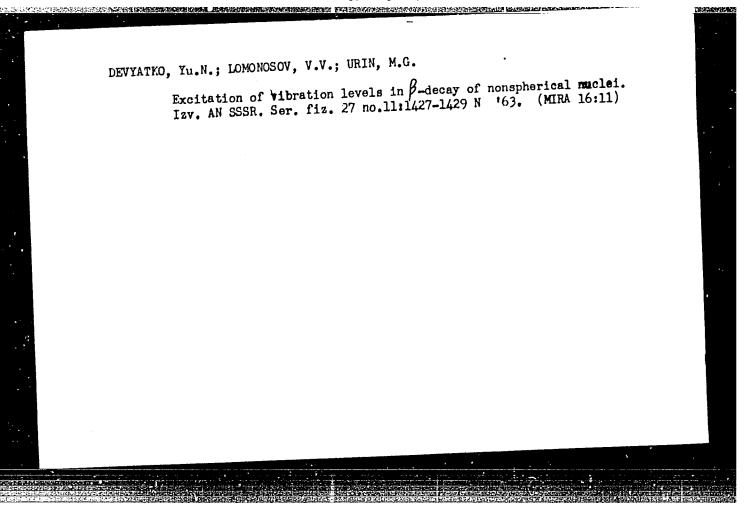


TSUKANOV, Vladimir Andreyevich, kend.tekhn.nauk; LOMONOSOV, V.T., obshchiy red.; KHINSKIY, P.D., kand.tekhn.nauk, red.; VASIL'YZVA, V.P.. red.izd-va; SOKOLOVA, L.V., tekhn.red.

[Using manganese in alloying structural steels] Legirovanie konstruktsionnoi stali margantsem. Pod obshchei red. V.T.Lomonosova. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 206 p.

(Manganese steel)

(Manganese steel)



S/0056/64/046/006/2070/2077

ACCESSION NR: AP4042570

AUTHORS: Devyatko, Yu. N.; Lomonosov, V. V.; Urin, M. G.

TITLE: Vibrational-rotational interaction in deformed nuclei

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 2070-2077

TOPIC TAGS: pair theory, quadrupole moment, vibration spectrum, rotation spectrum, oscillator strength, Hamilton equation

ABSTRACT: The parameters of vibration-rotation interaction in deformed nuclei are calculated by means of a microscopic description, using a model in which pairing and quadrupole-quadrupole interactions between nucleons are taken into account. The Hamiltonian of the vibration-rotation interaction is obtained in the same way as in the theory of molecular spectra, and the parameters of this Hamiltonian are calculated for the "cranking" model with account of the Cooper pair correlations. First order effects with respect to the vibration-

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ACCESSION NR: AP4042570

rotation interaction are considered. The calculations performed in the quasiclassical approximation for particles subject to an oscillator potential are compared with experimental data. In view of the crudeness of the model, only qualitative agreement is obtained between the calculated and experimental values. "The authors wish to thank D. F. Zaretskiy for very valuable discussions." Orig. art. has: 2 tables and 27 formulas.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Engineering-Physics Institute)

SUBMITTED: 06Aug63 ENCL: 00

SUB CODE: NP NR REF SOV: 006 OTHER: 011

Card 2/2

L' 21817-65 EWT(1)/EWT(m)/T/EEC(b)-2 DIAAP/IJP(c)

ACCESSION NR: AP5004413

5/0056/65/048/001/0368/0374

AUTHOR: Zaretskiy, D. F.; Lomonosov, V. V.

TITLE: Spontaneous emission of gamma quanta from crystals

SCIRCE: Zhurnel eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 1, 1965, 368-374

TOPIC TAGS: exciton, nuclear exciton, gamma emission, emission level width, spontaneous emission, exciton propagation

ABSTRACT: The conditions are investigated, under which a gamma quantum radiated by one of the nuclei without recoil (Mossbauer effect) can be absorbed by another nucleus of the same type, so that the excitation (nuclear exciton) can propagate over an entire host crystal consisting of excited and unexcited nuclei of the same type. It is shown that when a nuclear exciton is produced, the main characteristics of spontaneous emission change markedly, because angular anisotropy appears and the gamma quantum flux is concentrated predominantly in the direction of the reciprocal-lattice vector. The emission probability in this direction is

Card 1/2

L 24817-65 AP5004413 ACCESSION NR: estimated to be approximately equal to the square of the effective number of nuclei. It is also shown that the formation of a nuclear exciton is connected with an increase in the width of the emitting level by a factor proportional to the cube root of the number of effective nuclei. It is thus possible to obtain charply directional beams of monochromatic gamma quanta and the lifetimes of the nuclear isomers can be greatly reduced when such isomers are placed in a crystal consisting of unexcited nuclei of the same sort. "We thank F. L. Shapiro for valuable remarks and also V. K. Voytovetskiv and S. M. Fevnberg for discussions." Orig. art. has: 30 formulas. ASSOCIATION: Institut atomnoy energii (Insititute of Atomic Energy) SUB CODE: SS. OP ENCL: 00 SURMITTED: 28Jul64 OTHER: 003 NR REF SOV: Card 2/2

ACCRESION OF THE DIME

)/Q367/65/Q01/Q01/QQ32/QQ37

AUTHOR: Lomondsov, V. V.; Urin, M. G.

TITLE: Interaction of the Beta and Gamma bands in deformed nuclei

SOURCE: Yadernaya fizika, v. I. no. I. 1965, 32-37

TOPIC TAGS: Bets Games band interaction, deformed nucleus, level interaction, Alaga rule correction, quadrupole nuclear interaction, pairing nuclear interaction

ABSTRACT: Collective levels of strongly deformed nuclei may be treated within the framework of the simple rotational model of spheroidal nucleus. Experimental deviations from the predictions of the simple rules may be explained by the vibrational-rotational interactions and interactions with one-particle degrees of freedom. On the basis of microscopic descriptions, the parameters of such interactions were deduced earlier without the introduction of any new constants (see, e.g., V. Radojevic, A. Sobiczewski, Z. Szymanski, Nucl. Phys., 38, 607, 1962; Yu. H. Devyatko, V. V. Lomonosov, H. G. Urin, Zhett, 46, 2070, 1964). The present paper discusses theoretically the interactions between the and present as the result of the vibrational-rotational interactions; using the pairing in-

Card 1/2

teraction and quadrupole the appropriate interactional motion turns out the results show that in els (in isotopes of Th, leffects. Calculated corrotational interactions and Pu <sup>240</sup> . The authors art, has: 22 formulas and subject of the corrotations of the corrections of the corrotations of the corrections of the	ion parameter. The bean essential nuclei with anomal, Pu), the A-Frection for the Alare tabulated for thank D. F. Zaret	e nonadiabati feature of t lously close band interact aga rules cat Th <sup>230</sup> . Th <sup>232</sup>	he estimation properties and vibration may lead to used by the vibration by the vibration with the vibration will be used by t	cocedure. ional lev- observable itional- is, Pu <sup>218</sup>
ASSOCIATION: Moskovskiy sics Institute)		eskiy instit	it (Moscow Engin	ering-Phy-
SUENITTED: 30Jun64	i de la companya de La companya de la co	NCL: 00	SUB CODE	1 10
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		THER: 004		
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#### "APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000930510

EWT(m)/T ACC NR. AP6017590 UR/0367/66/003/002/0263/026 SOURCE CODE: AUTHOR: Zaretskiy, D. F.; Lomonosov, V. V. ORG: none TITLE: Concerning certain features of the radiation of gamma quanta from nuclei in a crystal lattice SOURCE: Yadernaya fizika, v. 3, no. 2, 1966, 265-267 TOPIC TAGS: gamma radiation, excited nucleus, nuclear isomer, nuclear energy level, crystal lattice structure, line width, spectral distribution, angular distribution ABSTRACT: This is a continuation of earlier work by the authors (ZhETF v. 43, 368, 1965) where it is shown that under certain conditions collective nuclear excitation (nuclear exciton) can exist in an ideal single crystal, and that this exciton has a decay width which differs noticeably from the natural width of the nuclear level. The present article is devoted to a study of the singularities of radiative decay of nuclear levels in the case when the conditions for the existence of a nuclear exciton are present, and to a study of the spectral and angular distribution of the gammaquantum flux in this case. To this end, one of the methods of generation of nuclear collective excitation and the effects associated with it is investigated, and the radiation from a recoilless nucleus placed in a definite crystal lattice point is determined. This recoilless nucleus is assumed for simplicity to be a two-level isomera-All the nuclei in the crystal are assumed to be of the same kind as the radiating Card 1/2

L 36377-66	
ACC NR: AP6017590	
nucleus, and line splitting is neglected. From the equations of motion the authors determine the amplitude of the state corresponding to the case when the isomer is excited but the other nuclei are not, the time dependence of the decay probability of the isomer, and the spectral and angular distribution of the gamma quanta cuitted under definite relations between the wavelength of the radiation and the lattice constants. The results are extended to a three-level isomer and to radiation of more than one nucleus in the crystal. It is concluded that the existence of the nuclear exciton can be ascertained by observation of the spectral and angular distribution of the gamma-quantum flux when the condition K = 2mb is satisfied (K - wave vector of the radiation, b - reciprocal lattice vector). The authors thank Y. K. Yoytovetskiy for useful discussions. Orig. art. has: 16 formulas.  SUB CODE: 20/ SUBM DATE: O8Jan65/ ORIG REF: OO2/ OTH REF: OO1	
 Card 2/2	

SACHKOV, A.F., kand.tekhn.nauk; LIFANOV, A.I., inzh.; LOMONOSOV, V.Yu., inzh.

Removing dust from the air in drilling heles in upraises. Gor. zhur.
no.8:68-69 Ag '63. (MIRA 16:9)

1. TSontral'nyy nauchno-issledovatel'skiy gornorazvedochnyy institut
tsvetnykh, redkikh i blagorednykh metallev, Moskva.

(Mine dusts-Removal)

LOMONOSOV, V. Yu.

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Electric power
Electro magnetic fields

SOV/50-59-6-2/17

3(7) AUTHORS: Dushkin, P. K., Lomonosov, Ye. G., Tatarskaya, M. S.

TITLE:

Forecast of the Formation of Cyclones and Anticyclones by Means of a Computer (Prognoz tsiklo- i antitsiklogeneza s

pomoshch'yu vychislitel'noy mashiny)

PERIODICAL:

Meteorologiya i gidrologiya, 1959, Nr 6, pp 11 - 16 (USSR)

ABSTRACT:

The following may be seen from the data available: in a number of cases the barotropic forecasts for one day of the baric field on the mean level prove to be true in most cases. The coefficients for the correlation between the forecast and the actual meteorological tendencies of one day attain the values of from 0.8 - 0.9. From case to case, however, a rather considerable variability of the correlation coefficient is observed. Therefore the observers were obliged to operate with forecasting schemes which take into account the three-dimensional atmospheric structure. More accurate solutions of the equations of the hydrothermodynamics of the atmosphere were obtained in the USSR. On this basis it was possible to work out a number of forecasting models (Refs 1,2,3). The numerical forecast of the baric field is in this case on several levels

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Forecast of the Formation of Cyclones and Anticyclones S07/50-59-6-2/17 by Means of a Computer

based upon the integral-solution by N. I. Buleyev and G. 1. Marchuk: formula (2). This solution of (2) is - applied to the daily forecast of the charts of the absolute baric topography of 850, 500 and 300 mb - to be approximated by sums. In this connection the integration is to be carried out along the vertical line \ \eta \ by means of the suspended band method and in the horizontal plane r, \psi according to rings: formula (3). The method used for the solution of this task is shown here. Forecasting the baric field according to this method takes approximately one hour with the computer "Strela". The analysis of the series of numerical baroclinic forecasts shows that they are - with respect to quality - better than the barotropic forecasts on the corresponding level. The taking into account of the three-dimensional baroclinic atmospheric structure in the model with three levels permitted the elimination of the most striking disadvantage: of two-dimensional forecasts. The shifting of the baric formations is far more accurately forecast according to the new scheme. The investigation of the series of numerical forecasts according to the

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Forecast of the Formation of Cyclones and Anticyclones S07/50-59-6-2/17 by Teans of a Computer

scheme of formula (3) shows that this scheme gives as a rule the possibility of forecasting the formation of cyclones and anticyclones. Table 1 gives the results of several forecasts for one day of the charts of absolute baric topography of 850,500 and 300 mb according to observation data obtained at 03 o'clock. The formation of cyclones and anticyclones was observed in the seven cases mentioned. All new formations were well calculated. The individual examples are demonstrated. Summarizingly it is stated that the use of the baroclinic scheme of forecasting with a higher number of levels permits even within the framework of the usual physical approximations the more accurate advance-calculation of the formation of cyclones and anticyclones in the free atmosphere. I. A. Kibel! assisted the authors with his advice in working at the forecast scheme with a higher number of levels. There are 4 figures, 1 table, and 4 references, 3 of which are Soviet.

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Dushkin, P.K., Lomonosov, Ye. G. AUTHORS:

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TITLE:

On the Vertical Currents in the Troposphere

PERIODICAL:

Meteorologiya i gidrologiya, 1900, Nr 1, pp 3-9

ABSTRACT:

Vertical motions of air masses can be only determined in the mathematical way. A system of equations with a quasigeostrophic, static, and adiabatic approximation can be made use of. Both the

in the standard coordinate system vertical velocity  $\tau = \frac{dp}{dt}$ 

x, y, p, t, and its analog win the stationary coordinate system x, y, z, t, appear then to be functions of the field of isobar level heights. It is sufficient for diagnostic and prognostic calculations of C(w) to know the field z. Here, the calculation of T was made by utilizing the prognostic model with 3 levels of baric topographic maps for the isobaric planes of 850, 500, and 300 mb (Ref 3). To calculate the vertical currents, equation (1) was used for the heat indraft under consideration of the mentioned approximations. The first summand of formula (1) denotes the contribution brought about by thermal advection, the second summand denotes the contribution brought about by

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temperature change. Both summands are approximated in the working formulas, with the fields z and q being calculated according to the three-level model (established on the strength of the solution by N. I. Buleyev and G. I. Marchuk (Ref 2)). is the tendency of the isobar level height. The vertical currents caused by the friction calculated on the strength of a scheme based on the solution by I. A. Kibel! (Ref 5): formula (2). It follows therefrom that in the cyclonic  $\tau_{\text{friction}} < 0 \text{ holds since } \Delta z > 0$ . A downdraught is regions observed in the anticyclonic regions. The working formulas (3) for the calculation of vertical currents at a certain point are written down on the levels I - III. The first summand describes the vertical currents caused by the thermal advection Tadvection, the second summand the ones caused by the local temperature change (nonstationary state)  $\tau_q$ , and the third summand the vertical currents caused by the turbulent friction Tis determined from (3) and the formulas serving for the calculation of the vertical velocity w are set up

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(by using  $C = \frac{pg}{RT}(q-w)$ , where g denotes the gravitational constant). Formulas (3) can be prognostic or diagnostic, depending on which z-field is utilized for the calculation. The vertical currents obtained here by the aid of a calculating machine for the regular point network of the points of Western Europe and of the European part of the USSR are analyzed. Calculations are shown to confirm the existence of a sq-called "mean level" with  $\frac{dC}{dp}$  = 0 in the atmosphere. The investigation of the systematic errors of many out of a hundred of numerical barotropic prognoses of  $\mathtt{AT}_{700}$  maps revealed that the errors change their sign on the transition from one season to another. An investigation is made here of the structure of vertical currents according to altitude, and the influence of individual physical factors on the magnitude of the vertical currents is estimated. On the strength of examples the authors show a relationship of practical importance between the fields of vertical motions on the one hand, and the cloudiness and precipitations on the other. The method shown here for the prognosis of vertical currents in 3 levels of the troposphere

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makes it possible to compute a vertical velocity field which is in good agreement with the cloudiness- and precipitation fields. On the strength of an analysis made of the vertical current fields at different levels of the troposphere and a statistical interpretation of the vertical velocities, mean characteristics were obtained here. Papers by A. F. Dyubyuk (Ref 4), N. V. Lebedeva (Ref 6), and N. I. Buleyev (Ref 1) are mentioned. There are 2 figures, 1 table, and 6 Soviet references.

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6.1130

AUTHORS:

Dushkin, P. K., Lomonosov, Ye. G., Lunin, Yu. N.

TITLE:

Experience Made With the Numerical Forecast of Humidity, Cloudiness, and Precipitations With the Aid of a Computer

PERIODICAL:

Meteorologiya i gidrologiya, 1960, No. 12, pp. 3 - 10

TEXT: The present paper describes the first experience made with the forecasting of cloudiness and precipitations on the basis of predeterminations of pressure fields, vertical currents, and humidity. Pressure was forecast by a numerical scheme with three levels set up according to the solution found by N. I. Buleyev and G. I. Marchuk (Ref.1). The equations for the heat supply are used in adiabatic approximation to calculate orientated vertical currents  $\tau$ . The method of forecasting is explained in Ref. 3. In humidity forecasts, the vertical currents must be interpolated for the 850, 700, and 500 mb levels by means of the interpolation polynomial of the 4th order. When determining the polynomial coefficients, the boundary conditions for  $\tau$  at sea-level altitude and on the upper atmospheric boundary are used additionally. When calculating the dew-point

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